

# Xiurui Zhao

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## Research Interests

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Active Galactic Nuclei, Supermassive Black Holes, High Energy Astrophysics

## Appointments & Fellowships

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<b>Center for Astrophysics   Harvard &amp; Smithsonian, Cambridge, U.S.</b> Post-Doctoral Research Fellow, advisor: Dr. Francesca Civano	2021-present
<b>Center for Astrophysics   Harvard &amp; Smithsonian, Cambridge, U.S.</b> Pre-Doctoral Fellow, advisor: Dr. Francesca Civano	2020-2021

## Education

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<b>Clemson University, Clemson, U.S.</b> Ph.D. in Astrophysics, advisor: Dr. Marco Ajello Dissertation: <i>Heavily Obscured Active Galactic Nuclei in NuSTAR Era</i>	2016-2021
<b>Lanzhou University, Lanzhou, China</b> B.Sc. in Physics, Cuiying Honors College	2012-2016

## Honors and Awards

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Clemson University Outstanding Graduate Researcher Award	2021
Clemson Science College Outstanding Graduate in Discovery Award	2021
Clemson Physics Department Graduate Research Assistant Award	2021
SAO Predoctoral Fellowship	2020-2021
Clemson Graduate Student Travel Grant	2019, 2021
Cuiying Honors College Abroad Study Fellowship	2014, 2015

## Accepted Scientific Proposals

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13 accepted X-ray/optical/mm proposals with \$240k grant as **PI**:

### X-ray

<i>Swift</i> -XRT (ToO, 3 ks)	2022
<i>NuSTAR</i> GI Program (600 ks <i>NuSTAR</i> + 195 ks XMM, \$150k)	2022
<i>NuSTAR</i> GI Program (100 ks <i>NuSTAR</i> + 60 ks XMM, \$90k)	2021

### Optical

MMT 6.5m Hectospec (0.3 night, 150 sources)	2023A
MMT 6.5m Binospec (0.4 night)	2023A

SAO FLWO 1.5m FAST (0.2 night)	2023A
SAO FLWO 1.2m Keplercam (1 night)	2023A
MMT 6.5m Hectospec (0.3 night, 135 sources)	2022B
MMT 6.5m Binospec (0.1 night)	2022B
SAO FLWO 1.2m Keplercam (1 night)	2022B
MMT 6.5m Binospec (0.1 DDT night)	2022A
SAO FLWO 1.2m Keplercam (2 nights)	2022A
<b>Sub-mm</b>	
Submillimeter Array (SMA) standard science observation (3 tracks)	2022B

## Professional Experience

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Co-organizers of CfA High Energy Astrophysics Division Seminar	2022-present
Member of <i>JWST</i> PEARLS Working Group	2022-present
Member of <i>HEX-P</i> Black Hole Growth Working Group	2022-present
Member of <i>AXIS</i> AGN/TDA Science Working Group	2022-present
Member of <i>NuSTAR</i> Extragalactic Survey Team	2020-present
Member of <i>Athena</i> Science Working Group	2020-present
Panelist for <i>NASA NuSTAR</i> Proposal Review	2022
Reviewer for CFHT	2022
Reviewer for ApJ, A&A	2020-present

## Invited Talks

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Arizona State University, Cosmology Seminar	Dec 2022
University of Arizona, Steward Observatory / NOIRLab Galaxy group meeting	Dec 2022
MIT, High Energy Astro Group meeting (Virtual)	Apr 2022
Clemson University, Local Group meeting (Short Term Visiting)	Apr 2022
INAF OAS, Bologna, local group meeting (Short Term Visiting)	Sep 2019

## Conferences & Contributed Talks

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241st AAS Meeting ( <i>Contributed Talk</i> )	Seattle, Jan 2023
<i>NuSTAR</i> 2022 Conference ( <i>Contributed Talk</i> )	Italy, June 2022
New England Regional Quasar and AGN Meeting ( <i>Contributed Talk</i> )	Storrs, May 2022
High Energy Astrophysics Division 19th Meeting ( <i>Poster</i> )	Pittsburgh, Mar 2022
Black Hole Across Space and Time ( <i>Contributed Talk</i> )	Virtual, Dec 2021
238th AAS Meeting ( <i>Dissertation Talk</i> )	Virtual, June 2021
237th AAS Meeting ( <i>Contributed Talk</i> )	Virtual, Jan 2021
Supermassive Black Holes Meeting ( <i>Contributed Talk</i> )	Virtual, Dec 2020
235th AAS Meeting ( <i>Contributed Talk</i> )	Honolulu, Jan 2020
X-ray Astronomy 2019 Meeting ( <i>Poster</i> )	Bologna, Italy, Sep 2019
High Energy Astrophysics Division 17th Meeting ( <i>Poster</i> )	Monterey, Mar 2019

MASC 2019 (*Contributed Talk, Local Organizing Committee*)  
233rd AAS Meeting (*Contributed Talk*)

Clemson, Mar 2019  
Seattle, Jan 2019

## Workshops & Schools

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End-to-end Simulations with SIXTE Workshop	Virtual, Mar 2022
2022 Submillimeter Array Interferometry School	Virtual, Jan 2022
Winter School at University of Freiburg	Freiburg, Germany, Feb 2015
Summer School at University of California, Berkeley	Berkeley, Jun-July 2014

## Assistant and Mentoring Experience

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Co-supervision of Clemson undergraduate students D. Cole and Z. Hu	2019
Research Assistant (advisor: Dr. Marco Ajello), Clemson	2018-2020
Teaching Assistant (PHYS 2230), Clemson	2016-2017

## References

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- **Prof. Marco Ajello**  
*PhD advisor*, Clemson University, [majello@g.clemson.edu](mailto:majello@g.clemson.edu)
- **Dr. Francesca Civano**  
*Postdoc advisor*, NASA Goddard Space Flight Center, [francesca.m.civano@nasa.gov](mailto:francesca.m.civano@nasa.gov)
- **Dr. Stefano Marchesi**  
*PhD co-advisor*, INAF OAS, Bologna, [stefano.marchesi@inaf.it](mailto:stefano.marchesi@inaf.it)

*Updated: 12/31/2022*

## Publication List

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6 first author and 10 co-author papers.

1. **X. Zhao**, S. Marchesi, M. Ajello, et al. 2019, ApJ, 870, 60  
*Compton-thick AGNs in the NuSTAR Era. II. A Deep NuSTAR and XMM-Newton View of the Candidate Compton-thick AGN in NGC 1358*
2. **X. Zhao**, S. Marchesi, M. Ajello, 2019, ApJ, 871, 182  
*Compton-thick AGN in the NuSTAR Era. IV. A Deep NuSTAR and XMM-Newton View of the Candidate Compton-thick AGN in ESO 116-G018*
3. S. Marchesi, M. Ajello, **X. Zhao**, et al. 2019, ApJ, 872, 8  
*Compton-thick AGNs in the NuSTAR Era. III. A Systematic Study of the Torus Covering Factor*
4. S. Marchesi, M. Ajello, **X. Zhao**, et al. 2019, ApJ, 882, 162  
*Compton-thick AGNs in the NuSTAR Era. V. Joint NuSTAR and XMM-Newton Spectral Analysis of Three “Soft-gamma” Candidate CT-AGNs in the Swift/BAT 100-month Catalog*
5. **X. Zhao**, S. Marchesi, M. Ajello, et al. 2020, ApJ, 894, 71  
*A broadband X-ray study of a sample of AGNs with [OIII] measured inclinations*
6. **X. Zhao**, S. Marchesi, M. Ajello, et al. 2021, A&A, 650, A57  
*The properties of the AGN torus as revealed from a set of unbiased NuSTAR observations*
7. **X. Zhao**, F. Civano, F. M. Fornasini, et al. 2021, MNRAS, 508, 5176  
*The NuSTAR extragalactic surveys of the JWST North Ecliptic pole Time-Domain Field*
8. N. Torres-Albà, S. Marchesi, **X. Zhao**, et al. 2021, ApJ, 922, 252  
*Compton-Thick AGN in the NuSTAR era VI: Characterization of eight Compton-Thick AGN candidates*
9. A. Traina, S. Marchesi, ..., **X. Zhao**, et al. 2021, ApJ, 922, 159  
*Compton-Thick AGN in the NuSTAR era VII: a joint NuSTAR, Chandra and XMM-Newton analysis of two nearby, heavily obscured sources*
10. R. Silver, N. Torres-Albà, **X. Zhao**, et al. 2022, ApJ, 932, 43  
*Chandra Follow-up Observations of Swift-BAT-selected AGNs II*
11. S. Marchesi, **X. Zhao**, N. Torres-Albà, et al. 2022, ApJ, 935, 114  
*Compton-Thick AGN in the NuSTAR era VIII: A joint NuSTAR-XMM-Newton monitoring of the changing-look Compton-thick AGN NGC 1358*
12. A. Pizzetti, ..., **X. Zhao**, et al. 2022, ApJ, 936, 149  
*A multi-epoch X-ray study of the nearby Seyfert 2 galaxy NGC 7479: Linking column density variability to the torus geometry*
13. R. Silver, N. Torres-Albà, **X. Zhao**, et al. 2022, ApJ, 194, 148  
*Compton-thick AGN in the NuSTAR Era. IX: A joint NuSTAR and XMM-Newton analysis of four local AGN*
14. R. A. Windhorst, ..., **X. Zhao**, et al. 2022, AJ, 165, 13  
*Webb’s PEARLS: Prime Extragalactic Areas for Reionization and Lensing Science: Project Overview and First Results*
15. D. Sengupta, ..., **X. Zhao**, et al. Submitted to A&A  
*Compton-thick AGN in the NuSTAR Era IX: Analysis of seven local CT-AGN candidates*

16. **X. Zhao**, F. Civano, et al., to be submitted to MNRAS in Jan. 2023  
*The NuSTAR extragalactic surveys of the JWST North Ecliptic pole Time-Domain Field II*